



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/849,187

05/04/2001

Ramesh Nagarajan

13-10

9273

7590

09/17/2004

Docket Administrator (Room 3C-512)

Lucent Technologies Inc.

600 Mountain Avenue

P.O. Box 636

Murray Hill, NJ 07974-0636

EXAMINER

WILSON, ROBERT W

ART UNIT

PAPER NUMBER

2661

DATE MAILED: 09/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/849,187

Applicant(s)

NAGARAJAN ET AL.

Examiner

Robert W Wilson

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2661

DETAILED ACTION

1.0 The application of Ramesh Nagarajan et. al. entitled "Traffic grooming method for undersea trunk and branch architecture with priority based upon 60/202,580 dated 5/9/2000. Claims 1-18 are pending.

Claim Rejections - 35 USC § 103

2.0 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3.0 **Claims 1-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirai (U.S., Patent No.: 4,899,337).

Referring to **Claim 1**, Hirai teaches: A node for grooming low capacity client signals into a high capacity signal (12-17 per Fig 3 or node. 12-17 per Fig 3 groom the signals 21 into 24 or high capacity signal per Fig 3)

A interface to a high capacity trunk for coupling to a type one node (The applicant broadly claims "a type one node". The examiner interprets 23 per Figure 1 which interface to a type one node per Fig 3)

An interface to a high capacity trunk for coupling to a type two node (The applicant broadly claims a "type two node". The examiner interprets 24 per Fig 2 as a interface to a type two node)

Wherein only a portion of those low capacity client signals destined for the type one signals destined for the type one node are groomed into the high capacity trunk to the type two node (When the sum of the signals 21 per Fig 3 are greater than the capacity that can be sent on 23 per Fig 3 the CALL CONTROL UNIT 17 per Fig 3 sets up the trunk connected to 24 per Fig 3 wherein only a portion of the signals from 21 are send over 24 per Fig 3 per col. 3 lines 24-col 4 lines 30 or per col. 2 lines 11-67)

Hirai does not expressly call for: wherein only a portion of those low capacity client signals destined to a type one node are groomed into the high capacity trunk to the type two node but

Art Unit: 2661

teaches that the low capacity signals 21 are sent over 23 to a type one node until the sum of the 21 is greater than the capacity of 23 at which time the CALL CONTROL UNIT send the excess or a portion of the low capacity signals over 24 or high capacity trunk per Fig 3.

It would have been obvious to one of ordinary skill in the art at the time of the invention that the low capacity signals 21 are sent over 23 to a type one node until the sum of the 21 is greater than the capacity of 23 at which time the CALL CONTROL UNIT sends the excess or a portion of the low capacity signals over 24 or high capacity trunk per Fig 3 and performs the same function as wherein only a portion of those low capacity client signals destined to a type one node are groomed into the high capacity trunk to the type two node.

In Addition Hirai teaches:

Regarding **Claim 2**, wherein the groomed portion is zero (The reference teaches that when the sum or 21 per Fig 3 is less than or equal to the capacity of 23 per Fig 3 then 24 carries no traffic or the groomed portion is zero)

Regarding **Claim 3**, where the type two node is a high traffic node (The applicant broadly claims "type two node is a high traffic node". The examiner interprets 24 per Fig 3 as a high traffic node because excess traffic of high traffic is being sent to 24 per Fig 3)

Regarding **Claim 4**, wherein the type one node is a cable station and the type two node is a central office (The examiner takes official notice that a cable station and a central office is well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to sent the traffic from 23 to a cable station and 24 to a central office in order to provide a path diversity)

Regarding **Claim 5**, wherein the low capacity client signals are E1 (PDH (plesiochronous digital hierarchy)) type signals and the high capacity signal is a synchronous transport mode (STM-1) signal (The reference teaches statistically multiplexing low speed signals into a high speed trunk lines per Fig 3. The examiner takes official notice that statistically multiplexing E1 into STM-1 signals is well known in the art per Fig 1 as well as per col. 1 line 50-col. 2 line 2 or U.S. Patent No.: 6,269,081. It would have been obvious to one of ordinary skill in the art at the time of the invention to statistically multiplex the E1 into STM-1 because they are low speed signals into high speed signals)

Referring to **Claim 6**, Hirai teaches: Apparatus for performing selective grooming of client signals (12-17 per Fig 3 or apparatus)

A node coupled (a) directly to a first node via a high capacity trunk (The applicant broadly claims "a first node". The examiner interprets 23 per Fig 3 is coupled to "a first node".) and

(b) to a second node via a high capacity trunk such that only a portion of the client signals destined for the first node are groomed into the high capacity trunk to the second node (The

Art Unit: 2661

applicant broadly claims “a second node”. The examiner interprets 24 per Fig 3 is connected to the second node via a high capacity trunk such that when the sum of the low capacity signals 21 per Fig 3 are greater than the capacity of 23 then the CALL CONTROL UNIT sends a portion of 21 per Fig 3 or client signals over 24 per Fig 3)

Hirari does not expressly call for: only a portion of the client signals destined for the first node are groomed into the high capacity trunk to the second node but teaches 24 per Fig 3 is connected to the second node via a high capacity trunk such that when the sum of the low capacity signals 21 per Fig 3 are greater than the capacity of 23 then the CALL CONTROL UNIT sends a portion of 21 per Fig 3 or client signals over 24 per Fig 3

It would have been obvious to one of ordinary skill in the art at the time of the invention that 24 per Fig 3 is connected to the second node via a high capacity trunk such that when the sum of the low capacity signals 21 per Fig 3 are greater than the capacity of 23 then the CALL CONTROL UNIT sends a portion of 21 per Fig 3 or client signals over 24 per Fig 3 performs the same function as only a portion of the client signals destined for the first node are groomed into the high capacity trunk to the second node.

In Addition Hirai teaches:

Regarding **Claim 7**, wherein the groomed portion is zero (The reference teaches that when the sum or 21 per Fig 3 is less than or equal to the capacity of 23 per Fig 3 then 24 carries no traffic or the groomed portion is zero)

Regarding **Claim 8**, wherein the first node is a low traffic node and the second node is a high traffic node (The applicant broadly claims “first node is a low traffic node and the second node is type is a high traffic node”. The examiner interprets 24 per Fig 3 as a high traffic node because excess traffic of high traffic is being sent to 24 per Fig 3 and 23 is a low traffic node because the regular traffic is send to 23 per Fig 3)

Regarding **Claim 9**, wherein the first node is a cable station and a second node is a central office (The examiner takes official notice that a cable station and a central office is well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to send the traffic from 23 to a cable station and 24 to a central office in order to provide a path diversity)

Regarding **Claim 10**, wherein the low capacity client signals are E1 (PDH (plesiochronous digital hierarchy)) type signals and the high capacity signal is a synchronous transport mode (STM-1) signal (The reference teaches statistically multiplexing low speed signals into a high speed trunk lines per Fig 3. The examiner takes official notice that statistically multiplexing E1 into STM-1 signals is well known in the art per Fig 1 as well as per col. 1 line 50-col. 2 line 2 or U.S. Patent No.: 6,269,081. It would have been obvious to one of ordinary skill in the art at the time of the invention to statistically multiplex the E1 into STM-1 because they are low speed signals into high speed signals)

Art Unit: 2661

Referring to **Claim 11**, Hirari teaches: A method for use in performing selective (12-17 per Fig 3 Selectively groom the signals 21 into 24 per Fig 3), the method comprising the steps of:

Determining an aggregate amount of traffic between two landing sites (The STORE MONITORING UNIT 16 per Fig 3 determines if the DATA BUFFER is overflowing or determining the aggregate amount of traffic between the second site where the data is being sent)

If the determining aggregate amount of traffic is greater than a predetermined portion of a high capacity trunk, provision a trunk for directly connecting the two landing sites (If the aggregate amount is greater than 23 can carry then 24 is added by CALL CONTROL UNIT 17 per Fig 3)

Hirari does not expressly call for: a second site but teaches the multiplexer for trunking per Fig 3.

It would have been obvious to one of ordinary skill in the art at the time of the invention that a second site would be present in order to received the data in order for the invention to work.

In Addition:

Regarding **Claim 12**, wherein the land sites are cable station of an undersea cable network (The examiner takes official notice that cable station are well known in the art per Japanese Patent Publication Number 10-041887 wherein the reference teaches that cable station are utilized in a low traffic environment per Abstract. It would have been obvious to one of ordinary skill in the art to utilize the system per Fig 3 in US Patent No.: 4,899,377 to aggregate low traffic)

Regarding **Claim 13**, wherein the low capacity client signals are E1 (PDH (plesiochronous digital hierarchy)) type signals and the high capacity signal is a synchronous transport mode (STM-1) signal (The reference teaches statistically multiplexing low speed signals into a high speed trunk lines per Fig 3. The examiner takes official notice that statistically multiplexing E1 into STM-1 signals is well known in the art per Fig 1 as well as per col. 1 line 50-col. 2 line 2 or U.S. Patent No.: 6,269,081. It would have been obvious to one of ordinary skill in the art at the time of the invention to statistically multiplex the E1 into STM-1 because they are low speed signals into high speed signals)

Referring to **Claim 14**, Hirari teaches: A method for use in node (12-17 per Fig 3 or method for use in node) the method comprising the steps of:

Receiving low capacity client signals (21 per Fig 3 or low capacity signals)

Selectively grooming a portion of the received low capacity client signals into a high capacity trunk for transmission to a first type of node (The applicant broadly claims a "a first type of node". The examiner interprets 12-17 groomed the low capacity client signals from 21 into 23 per Fig 3 or first type of node)

Art Unit: 2661

Transmitting other of the low capacity client signals over another high capacity trunk directly coupled to a second type of node (The applicant broadly claims "a second type of node". The examiner interprets CALL CONTROL UNIT determines when the sum of 21 is greater than the capacity of 23 at which time the CALL CONTROL UNIT sets up 24 per Fig 3 or high capacity trunk directly coupled to 24 or second type of node)

Hirari does not expressly call for: a first node or second node but teaches 23 and 24 per Fig 3.

It would have been obvious to one of ordinary skill in the art at the time of the invention that 23 performs the same function as a type one node and 24 performs the same function as a type two node.

In Addition Hirai teaches:

Regarding **Claim 16**, wherein the groomed portion is zero (The reference teaches that when the sum or 21 per Fig 3 is less than or equal to the capacity of 23 per Fig 3 then 24 carries no traffic or the groomed portion is zero)

Regarding **Claim 17**, wherein the first node is a cable station and a second node is a central office (The examiner takes official notice that a cable station and a central office is well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to send the traffic from 23 to a cable station and 24 to a central office in order to provide a path diversity)

Regarding **Claim 18**, wherein the first node is a low traffic node and the second node is a high traffic node (The applicant broadly claims "first node is a low traffic node and the second node is type is a high traffic node". The examiner interprets 24 per Fig 3 as a high traffic node because excess traffic of high traffic is being sent to 24 per Fig 3 and 23 is a low traffic node because the regular traffic is sent to 23 per Fig 3)

Conclusion

4.0 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W Wilson whose telephone number is 571/272-3075. The examiner can normally be reached on M-F (8:00-4:30).

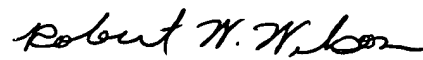
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 571/272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2661

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



KENNETH VANDERPUYE
PRIMARY EXAMINER



Robert W Wilson
Examiner
Art Unit 2661

RWW
September 10, 2004